MD 64 (JEFFERSON AVE) AT EASTERN BLVD

PROJECT DESCRIPTION

GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF MD 64 (JEFFERSON AVENUE) AND EASTERN BOULEVARD, IN WASHINGTON COUNTY.

MD 64 IS ASSUMED TO RUN IN AN EAST–WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A FULLY ACTUATED MODE USING 8 COUNT NEMA PHASING. VIDEO DETECTION CAMERAS SHALL PROVIDE PRESENCE AND ADVANCE DETECTION. ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE PROVIDED TO CROSS THE NORTH LEG OF THE INTERSECTION, AS WELL AS LED COUNTDOWN PEDESTRIAN HEADS. PRE–EMPTION SHALL BE PROVIDED FOR ALL FOUR APPROACHES TO THE INTERSECTION.

III. ACCESSIBLE PEDESTRIAN PUSHBUTTON STATION OPERATION:

WHEN THE PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME; THE STATION UNIT WILL ANNOUNCE THE FOLLOWING MESSAGES FOR EACH LEG OF THE INTERSECTION:

1. NORTH LEG
   WAIT: "WAIT TO CROSS EASTERN AT JEFFERSON, WAIT"
   WALK: RAPID TICK

THE WALK MESSAGE (RAPID TICK) WILL LAST FOR THE DURATION OF THE "WALK PHASE."

PROJECT CONTACTS

1. THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. GEORGE H. SMALL
ASSISTANT DISTRICT ENGINEER
TRAFFIC
PHONE: 301–729–8444

MR. JOHN TRUE
ASSISTANT DISTRICT ENGINEER
CONSTRUCTION
PHONE: 301–729–8140

MR. ANTHONY CRAWFORD
ASSISTANT DISTRICT ENGINEER
MAINTENANCE
PHONE: 301–729–8455

MR. ROBERT ROWAN
DISTRICT UTILITY ENGINEER
PHONE: 301–729–8480

MR. SONNY BAILEY
CHIEF, SIGNAL OPERATIONS
PHONE: 301–787–7676

EQUIPMENT LIST

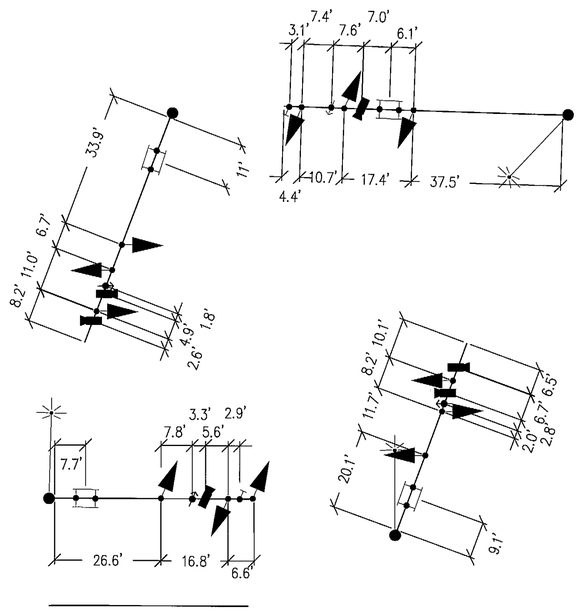
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

CATEGORY CODE	QTY	UNITS	DESCRIPTION
203030	9	CY	TEST PIT EXCAVATION
655120	32	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
800000	1	EA	FURNISH AND INSTALL NEMA CONTROLLER ASCII WITH TELEMETRY
800000	1	EA	2 WIRE CENTRAL CONTROL UNIT
800000	2	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON
800000	2	EA	LED 16 INCH COUNTDOWN PEDESTRIAN HEADS
801004	20	CY	CONCRETE FOR SIGNAL POLE, PEDESTRIAN SIGNAL, AND CONTROLLER FOUNDATION
801605	111	SF	SHEET ALUMINUM SIGNS
802501	440	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805135	60	LF	3" SCHEDULE 80 RIGID PVC CONDUIT– TRENCHED
805140	20	LF	4" SCHEDULE 80 RIGID PVC CONDUIT– TRENCHED
805155	360	LF	4" SCHEDULE 80 RIGID PVC CONDUIT– SLOTTED
807202	1	EA	METERED SERVICE PEDESTAL EMBEDDED
811011	5	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813015	82	SF	INSTALL OVERHEAD SIGN (INCLUDING ALL HARDWARE)
816001	6	EA	VIDEO DETECTION CAMERA
816005	1	EA	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
816010	3	EA	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
816015	1	EA	VIDEO INTERFACE EQUIPMENT
816201	1	EA	DISCRIMINATOR MODULE, 4 CHANNEL, NO. 764
816215	4	EA	OPTICOM NO. 721 DETECTOR EYE
818004	2	EA	10 FOOT BREAKAWAY PEDESTAL POLE
818036	2	EA	27 FT. STEEL POLE WITH A SINGLE 50 FOOT MAST ARM
818041	1	EA	27 FT. STEEL POLE WITH A SINGLE 60 FOOT MAST ARM
818052	1	EA	27 FT. STEEL POLE WITH A SINGLE 70 FOOT MAST ARM
837001	8	EA	GROUND ROD – 3/4" DIAMETER X 10' LENGTH
860270	12	EA	8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
860284	40	EA	12" LED VEHICULAR SIGNAL HEAD SECTION
860288	920	LF	FURNISH AND INSTALL 4 CONDUCTOR OPTICOM CABLE
861105	235	LF	ELECTRICAL CABLE – 2 CONDUCTOR (NO. 14 AWG)
861107	245	LF	ELECTRICAL CABLE – 5 CONDUCTOR (NO. 14 AWG)
861108	2,750	LF	ELECTRICAL CABLE – 7 CONDUCTOR (NO. 14 AWG)
861116	535	LF	ELECTRICAL CABLE – 2 CONDUCTOR (NO. 12 AWG) TRAY CABLE
866104	3	EA	20 FT. LIGHTING ARM ON SIGNAL STRUCTURE WITH 250 WATT HPS LAMP & LUMINAIRE
871201	1	EA	INSTALL CONTROLLER AND CABINET – BASE MOUNT
873001	1	EA	REMOVE AND DISPOSE MATERIAL AND EQUIPMENT

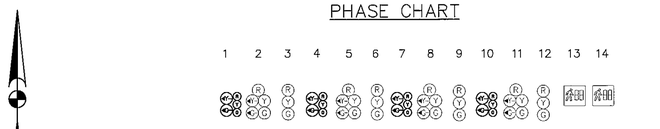
C. SHA FORCES SHALL REMOVE THE CONTROLLER AND AUXILLARY EQUIPMENT FROM THE CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

T3 DESIGN, P.C.
3927 OLD LEE HWY
SUITE 101-C
FAIRFAX, VA 22030
PHONE: 703-359-5861
www.t3design.us

MAST ARM DIMENSION DIAGRAM

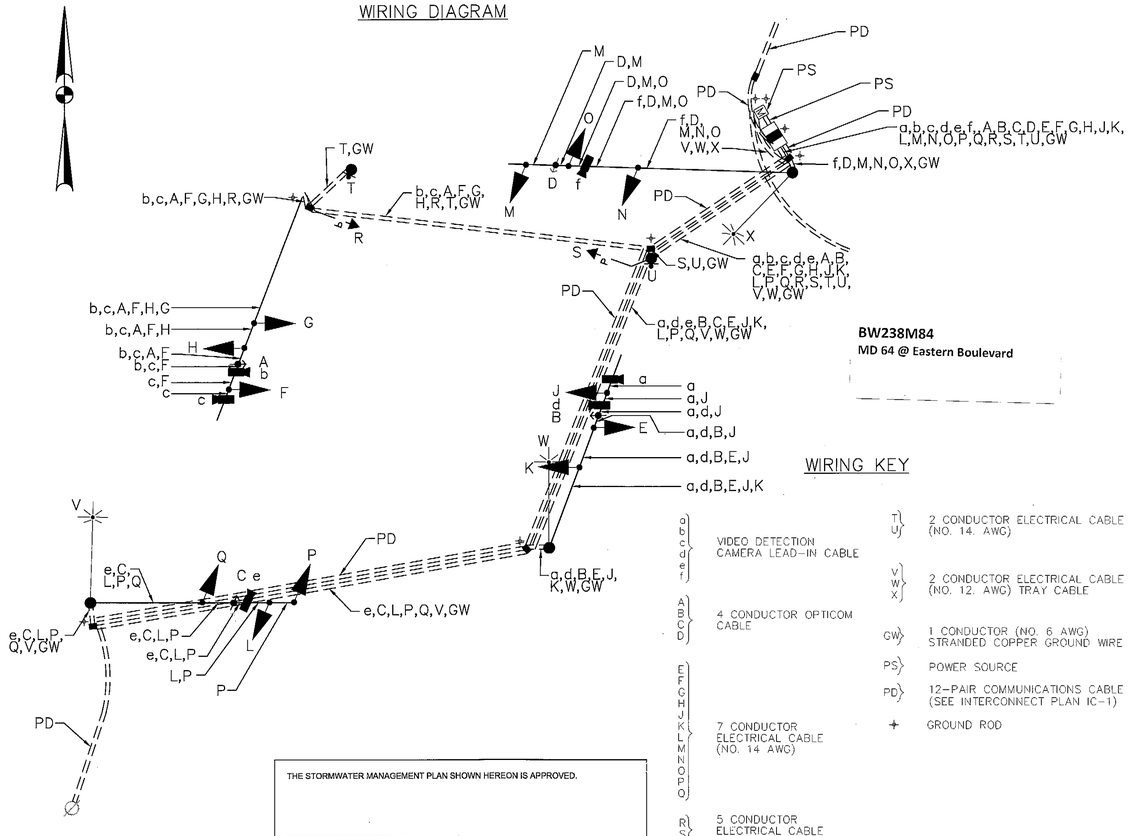


PHASE CHART



PHASE 1 AND 5	←G/R	←G/R	R	←G/R	←G/R	R	R	R	R	R	R	DW	DW
1 AND 5 MAY CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6													
PHASE 1 AND 6	R	R	R	←G/G	←G/G	G	R	R	R	R	R	DW	DW
1 AND 6 CHANGE	R	R	R	←Y/G	←Y/G	G	R	R	R	R	R	DW	DW
PHASE 2 AND 5	←G/G	←G/G	G	R	R	R	R	R	R	R	R	DW	DW
2 AND 5 CHANGE	←Y/G	←Y/G	G	R	R	R	R	R	R	R	R	DW	DW
PHASE 2 AND 6	G	G	G	G	G	G	R	R	R	R	R	W/K	W/K
PED CLEARANCE AND COUNTDOWN	G	G	G	G	G	G	R	R	R	R	R	FL/DW	FL/DW
2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	DW	DW
PHASE 3 AND 7	R	R	R	R	R	R	←G/R	←G/R	R	←G/R	←G/R	R	DW	DW
3 AND 7 CHANGE TO 3 AND 8, 4 AND 7, OR 4 AND 8														
PHASE 3 AND 8	R	R	R	R	R	R	←G/G	←G/G	G	R	R	R	DW	DW
3 AND 8 CHANGE	R	R	R	R	R	R	←Y/G	←Y/G	G	R	R	R	DW	DW
PHASE 4 AND 7	R	R	R	R	R	R	R	R	R	←G/G	←G/G	G	DW	DW
4 AND 7 CHANGE	R	R	R	R	R	R	R	R	R	←Y/G	←Y/G	G	DW	DW
PHASE 4 AND 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW
4 AND 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK
PRE–EMPTION A	←G/G	←G/G	G	R	R	R	R	R	R	R	R	R	DW	DW
PRE–EMPTION B	R	R	R	←G/G	←G/G	G	R	R	R	R	R	R	DW	DW
PRE–EMPTION C	R	R	R	R	R	R	R	R	R	←G/G	←G/G	G	DW	DW
PRE–EMPTION D	R	R	R	R	R	R	←G/G	←G/G	G	R	R	R	DW	DW

WIRING DIAGRAM



WIRING KEY

a b c d e f	VIDEO DETECTION CAMERA LEAD–IN CABLE
A B C D	4 CONDUCTOR OPTICOM CABLE
E F G H J K L M N O P Q	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
R S	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
T U	2 CONDUCTOR ELECTRICAL CABLE (NO. 14. AWG)
V W X	2 CONDUCTOR ELECTRICAL CABLE (NO. 12. AWG) TRAY CABLE
GW	1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
PS	POWER SOURCE
PD	12–PAIR COMMUNICATIONS CABLE (SEE INTERCONNECT PLAN IC–1)
+	GROUND ROD

THE STORMWATER MANAGEMENT PLAN SHOWN HEREON IS APPROVED.

WASHINGTON COUNTY DIVISION OF PUBLIC WORKS DATE

NO.	REVISION DESCRIPTION	BY	DATE

DESIGNED BY: SJW
DRAWN BY: RLO
CHECKED BY: AJM
DATE: 09/12

DIVISION OF PUBLIC WORKS
WASHINGTON COUNTY, MARYLAND
ENGINEERING DEPARTMENT

Washington County Administration Building
80 W. Baltimore St., Hagerstown, MD 21740
Phone: 240-313-2400 Fax: 240-313-2401

EASTERN BOULEVARD
WIDENING - PHASE 1

TRAFFIC SIGNAL PLANS
MD 64 AT EASTERN BLVD

SG-2

SCALE
1"=20'

SHEET NO.
44

10-205